REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-6, 8-17, 19-28, and 30-34 are pending in this application, Claims 7, 18, and 29 having been canceled without prejudice or disclaimer, and Claims 1, 5, 6, 8, 10, 12, 16, 17, 19, 21, 23-28, and 30-34 having been amended by the present amendment. Support for amended Claims 1, 5, 6, 8, 10, 12, 16, 17, 19, 21, 23-28, and 30-34 can be found, for example, in the original claims, drawings, and specification as originally filed.[1] No new matter has been added.

In the outstanding Office Action, Claims 1-11 and 23-33 were rejected under 35 U.S.C. § 101; Claims 1, 12, 23, and 34 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lee et al. (U.S. Patent No. 7,047,535; hereinafter "Lee") in view of Pace et al. (U.S. Patent No. 7,047,535, hereinafter "Pace"); Claims 2, 2, 13, 14, 24, and 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Pace and further in view Lam et al. (U.S. Patent No. 5,926,636; hereinafter "Lam"); Claims 4, 15, and 26 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Pace and further in view of Nakamura et al. (U.S. Patent No. 5,987,529; hereinafter "Nakamura"); Claims 7, 18, and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Pace and further in view of Vandewalle et al. (U.S. Publication No. 2004/015402; hereinafter "Vandewalle"); and Claims 8-11, 19-22, and 30-33 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Pace, Vandewalle, and further in view of Hamilton et al. (U.S. Publication No. 2003/0177283; hereinafter "Hamilton").

In response to the rejection of Claims 1-11 and 23-33 under 35 U.S.C. § 101, Applicants respectfully submit that an image forming apparatus is clearly an article of

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[1] See page 10, lines 12-19 of the specification and original Claim 7.

manufacture and is thus statutory. Pages 2-3 of the outstanding Office Action state that "[a] wrapping part, function calls appear to be a software module. Therefore, claims 1, 23 are non-statutory because they recite apparatus claims that comprise software embodiments." However, Claim 1 recites "a wrapping part configured to convert a function called by the application" which Applicants respectfully submits recites an article of manufacture. Further, Applicants Figure 3 shows hardware implementations of Applicants' claimed "wrapping part." Thus, Claims 1-11 are not directed towards software per se.

Further, Applicants have amended independent Claims 23 and 27 to recite a "computer readable storage medium encoded with instructions which when executed by a computer cause a processor to execute a method." MPEP 2106 IV.B.1(a) states that:

> A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

In view of the presently submitted claim amendments and foregoing comments Applicants respectfully submit that Claims 1-11 and 23-33 define statutory subject matter. Accordingly, Applicants respectfully request the rejection of Claims 1-11 and 23-33 under 35 U.S.C. § 101 be withdrawn.

In response to the rejections under 35 U.S.C. § 103(a), Applicants have amended independent Claim 1 to include features of Claim 7. Applicants respectfully submit that amended independent Claim 1 recites novel features clearly not disclosed or rendered obvious by the applied references.

Amended independent Claim 1 is directed to an image forming apparatus including, *inter alia*:

> ... a virtual application service that is configured to
> operate as a client process for the control service and to operate
> as a server process for the application, and

a wrapping part configured to convert a function called by the application, and perform a function call to the control service by using the converted function, wherein the wrapping part is included in the virtual application service.

Page 7 of the outstanding Office Action, in the rejection of then dependent Claim 7, acknowledges that Lee and Pace do not disclose a "virtual application service that operates as a client process for the control service and operates as a server process for the application, wherein the wrapping part is included in the virtual application service." In an attempt to cure the above deficiency, the Office Action cites Vandewalle.

Paragraph [0021] of Vandewalle describes that

the proxy prepares a process level call invoke applet message with the parameter values provided by the client application[.] Next the proxy sends this call to the Java card through the API, a communications module to the Java card run-time environment (JCRE). The JCRE unmarshals the parameters and invokes the methods of the applet with a local call. After execution of the methods, the results are marshaled and the JCFE prepares a process level reply message and sends the return as a reply over the inverse path to the applet proxy at the client machine.

Page 7 of the outstanding Office Action contends that Vandewalle's Java card run – time environment (JCRE) corresponds to Applicants' claimed "virtual application service." However, Vandewalle does not disclose or suggest "a virtual application service that is configured to operate as a client process for the control service and to operate as a server process for the application," as recited in Applicants' amended independent Claim 1. Vandewalle merely describes that the JCRE unmarshals parameter values provided by the client application and invokes the methods of the applet with a local call. Unmarshalling parameter values provided by a client application is not *operating as a client process for the control service and operating as a server process for the application*.

Further, Vandewalle does not disclose or suggest that "the wrapping part is included in the virtual application service," as recited in Applicants' amended independent Claim 1.

Vandewalle only describes that high level protocols can be adapted for execution in a distributed system comprising at least one smart card with a Java card virtual machine (server) and at least one card acceptance device or terminal (client) running under a Java virtual machine.[2] Vandewalle does not describe that the wrapping part, configured to convert a function called by the application and perform a function call to the control service by using the converted function, is included in the smart card with the Java card virtual machine as would be required for the teaching in Vandewalle to disclose or suggest inclusion of a wrapping part in a virtual application service.

Accordingly, Applicants respectfully submit that amended independent Claim 1 (and all claims depending thereon) patentably distinguishes over Lee, Pace, and Vandewalle. Further, Applicants respectfully submit that Lam, Nakamura, and Hamilton fail to cure any of the above-noted deficiencies of Lee, Pace, and Vandewalle.

Amended independent Claim 12 recites "wherein a virtual application service operates as a client process for the control service and operates as a server process for the application, and wherein the converting is performed by the virtual application service." Thus, Applicants respectfully submit that Claim 12 (and all claims depending thereon) is patentable for at least the reasons discussed above.

Amended independent Claims 16 and 27 recite "wherein a virtual application service operates as a client process for the control service and operates as a server process for the application, and wherein the selecting is performed by the virtual application service." Thus, Applicants respectfully submit that Claims 16 and 27 (and all claims depending thereon) are patentable for at least the reasons discussed above.

Amended independent Claims 23 and 34 recite "wherein the method is included in a virtual application service that operates as a client process for the control service and operates

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[2] See paragraph [0018] of Vandewalle.

as a server process for the application." Thus, Applicants respectfully submit that Claims 23

and 34 (and all claims depending thereon) are patentable for at least the reasons discussed

above.

Consequently, in view of the present amendment, and in light of the above discussion,

the pending claims as presented herewith are believed to be in condition for formal

allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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